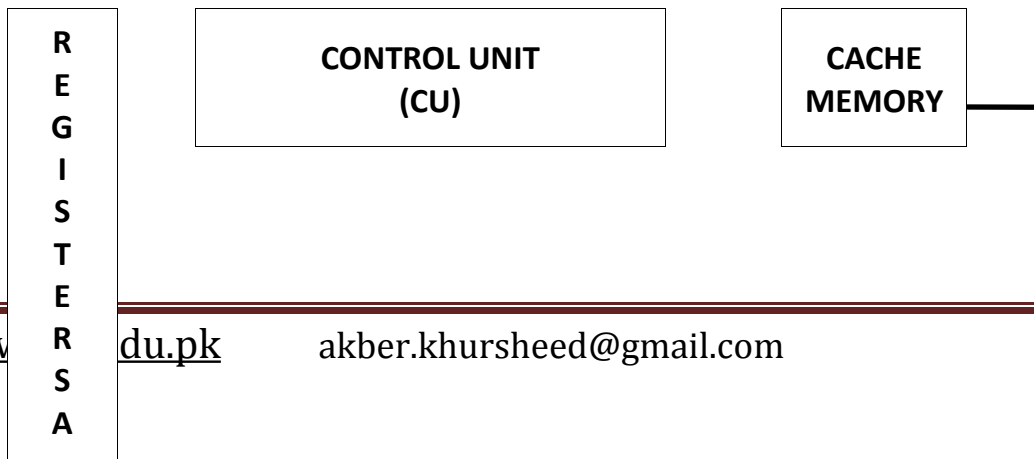
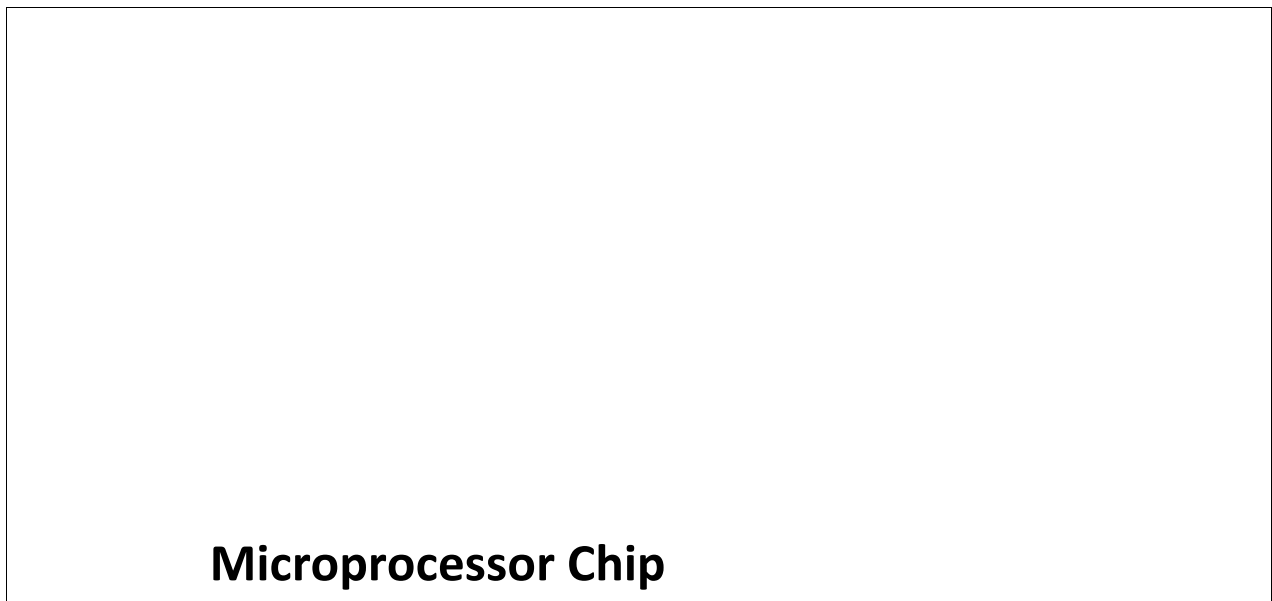


Components of CPU SLO # 2.1.1

CENTRAL PROCESSING UNIT:

The main unit of any computing system is called central processing unit. It is the brain or the nerve center of computer system. This unit is divided into four main parts. As described below.

1. Control Unit CU.
2. Arithmetical Logical Unit ALU.
3. Memory Unit MU.
4. Registers.



**ARITHMETIC AND LOGIC UNIT
(ALU)**

- **CONTROL UNIT:**

It controls time and sequence of operations of computer all the computers resources are managed by control unit. It works like a traffic cop directing the flow of data between the components of the CPU and to and from other drives.

1. It controls Input / output devices.
2. Storage and retrieval of data from memory.
3. Control the execution of program.

- **ARITHMETICAL LOGICAL UNIT:**

The arithmetical logical unit performs actual processing of data which includes addition, subtraction, multiplication and division. This unit also performs certain logical operations such as comparing two numbers to see one is greater than other or they are equal, in this way computer is able to make simple decisions.

- **Memory Unit:**

Each computer has a main memory which is also call internal storage or main storage, the memory unit is an integral physical part of computer and directly controlled by computer. Thus the data in main memory is automatically accessible. The information are stored in unique locations identified by an address. Normally memory unit is divided in to two parts.ROM and RAM.

- **REGISTERS:**

Registers are special storage areas build into micro processor to access data at high speed. There are fourteen registers in a micro processor, while each of new micro processor has few more registers for special reasons. All registers are sixteen bits (one word) wide, but some operations can be performed in one bite (Eight bits) specific registers. The 80386 and 80486 are called 32 bits micro processors.

- **BUSES:**

A processor communicates with input/output circuits and memory by using signals. These signal travel along a set of wires or connections called bus.

There are three kinds of buses.

1. Address Bus.
2. Control Bus.
3. Data bus.

- **ADDRESS BUS:**

Connections between the CPU and memory which transmit the address from which the CPU will read, or to which the CPU will write, OR a collection of wires connecting the CPU with main memory that is used to identify particular locations (address) in main memory where data is stored.

- **CONTROL BUS:**

It is a physical connection that carries control information between the CPU and other devices within the computer. The control bus carries signals that report the status of various devices. For Example, one line of the bus is used to indicate whether the CPU is currently reading from or writing to main memory.

- **DATA BUS:**

It is communication route through which data can travel between the computers central processing unit, memory, and peripherals. The speed at which data can travel between hardware components depends on the number of wires in the bus.